



MINISTER FOR THE ENVIRONMENT;
LABOUR RELATIONS

Statement No.

000520

STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE
ENVIRONMENTAL PROTECTION ACT 1986)

UPDATING & REOPENING OF THE TOODYAY ABATTOIR
CHURCH GULLY ROAD, TOODYAY

Proposal: To update and reopen the Toodyay Abattoir situated at Lot 89 Church Gully Road, Toodyay, as documented in schedule 1 of this statement (See note 2).

Proponent: G J Johnson

Proponent Address: Lot 97 Willoughby Way, Swan View, WA 6056

Assessment Number: 1217

Previous Assessment Number: 308

Previous Statement Number: Statement No. 221 (published on 11 February 1992)

Report of the Environmental Protection Authority: Bulletin 937

Previous Report of the Environmental Protection Authority: Bulletin 570

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is now subject to the following conditions and procedures which replace all previous conditions and procedures:

1 Implementation

1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

Published on
20 AUG 1999

- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments of July 1999, documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this and any previous statement issued for this proposal.

3 Environmental Management System

- 3-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to commissioning, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection that there is in place an environmental management system which includes the following elements:
- 1 An environmental policy and corporate commitment to it;
 - 2 Mechanisms and processes to ensure:
 - 1 planning to meet environmental requirements;
 - 2 implementation and operation of actions to meet environmental requirements;
 - 3 measurement and evaluation of environmental performance; and
 - 3 Review and improvement of environmental outcomes.
- 3-2 The proponent shall implement the environmental management system referred to in condition 3-1.

4 Wastewater Management Plan

- 4-1 Prior to commissioning, the proponent shall prepare a Wastewater Management Plan to achieve the following objectives:
- to ensure that the beneficial uses of the groundwater are not adversely impacted by the operation of the proposal;
 - to prevent pollution of the Avon River; and
 - to prevent the contamination of the groundwater in excess of appropriate guideline levels recognised by the Environmental Protection Authority, such as those in the National Health and Medical Research Council and the Agriculture and Resource Management Council of Australia and New Zealand publication "Australian Drinking Water Guidelines - National Water Quality Management Strategy" (1996).

This Plan shall be prepared to the requirements of the Environmental Protection Authority on advice of the Water and Rivers Commission and the Department of Environmental Protection, and shall address:

- 1 establishment of an on-going source of fresh water such that the limited local water resource is managed appropriately;
 - 2 efficient use and conservation of fresh water;
 - 3 disposal of treated wastewater consistent with the Water and Rivers Commission letter of 24 June 1998 and the attached guidelines, as modified by the Water and Rivers Commission from time to time (See schedule 3); and
 - 4 the development and implementation of a monitoring programme for wastewater, groundwater and surface water quality.
- 4-2 The proponent shall implement the Wastewater Management Plan required by condition 4-1.
- 4-3 The proponent shall make the Wastewater Management Plan required by condition 4-1 publicly available, to the requirements of the Environmental Protection Authority.

5 Noise Management Plan

- 5-1 Prior to commissioning, the proponent shall prepare a Noise Management Plan to protect the amenity of nearby residents from noise impacts resulting from activities associated with the proposal by ensuring that noise levels comply with the Environmental Protection (Noise) Regulations 1997, to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection.

This Plan shall address:

- 1 the location, dimensions and form of noise barriers to be constructed for the project;
 - 2 the sound power levels for equipment to be used for the project and details of acoustical treatment to be applied;
 - 3 special procedures necessary to restrict activities under weather conditions which increase noise propagation towards the residential area; and
 - 4 routine operating procedures to be adopted for particular operations to control noise emanating from the project.
- 5-2 The proponent shall implement the Noise Management Plan required by condition 5-1.
- 5-3 The proponent shall make the Noise Management Plan required by condition 5-1 available for public comment for a period of two weeks prior to the Environmental Protection Authority finalising its consideration of the Plan.

6 Decommissioning and Rehabilitation Management Plan

- 6-1 At least six months prior to decommissioning, the proponent shall prepare a Decommissioning and Rehabilitation Management Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

This Plan shall address:

- 1 removal or, if appropriate, retention of plant and infrastructure;
 - 2 final rehabilitation of all disturbed areas to a standard suitable for agreed new land use/s; and
 - 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.
- 6-2 The proponent shall implement the Decommissioning and Rehabilitation Management Plan required by condition 6-1 until such time as the Minister for the Environment determines that decommissioning and/or rehabilitation is/are complete.
- 6-3 The proponent shall make the Decommissioning and Rehabilitation Management Plan required by condition 6-1 publicly available, to the requirements of the Environmental Protection Authority.

7 Performance Review

- 7-1 Each six years following the commencement of construction, the proponent shall submit a Performance Review to the Department of Environmental Protection:
- to document the outcomes, beneficial or otherwise;
 - to review the success of goals, objectives and targets; and
 - to evaluate the environmental performance over the six years;

relevant to the following:

- 1 environmental issues and objectives reported on in Environmental Protection Authority Bulletins 570 and 937;
- 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
- 3 environmental management system environmental performance targets;
- 4 environmental management programs and plans; and/or
- 5 environmental performance indicators;

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

Note: The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment following consideration of the Performance Review.

8 Proponent

- 8-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 8-2 Any request for the exercise of that power of the Minister referred to in condition 8-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 8-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

9 Commencement

- 9-1 The proponent shall provide evidence to the Minister for the Environment within three years of the date of this statement that the proposal has been substantially commenced.
- 9-2 Where the proposal has not been substantially commenced within three years of the date of this statement, the approval to implement the proposal as granted in statement no. 221 shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 9-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond three years from the date of this statement at least six months prior to the expiration of the three year period referred to in conditions 9-1 and 9-2.
- 9-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding three years for the substantial commencement of the proposal.

10 Compliance Auditing

- 10-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 10-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal written advice that the requirements have been met.
- 10-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Note

- 1 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act. Prior to a licence being issued, the advice of the Water and Rivers Commission will be incorporated into the technical design and operating conditions for the abattoir to ensure that it conforms to the environmental management guidelines for animal-based industries.
- 2 The title of the proposal on statement No. 221 included reference to Lot 590 Church Gully Road, Toodyay. The Shire of Toodyay has advised that the abattoir is located on Lot 89 Church Gully Road, Toodyay.

CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

20 AUG 1999

Schedule 1

The Proposal (1217)

The proposal is to upgrade and reopen the Toodyay Abattoir following cessation of operations in May 1987. The abattoir commenced operations in March 1974 with a capacity to process 500 sheep per day, and ceased operating in May 1987.

At the time of closure, the abattoir was subject to a Works Order from the Health Department of Western Australian, which required upgrading of facilities to meet the Australian Code of Practice for Construction and Equipment of Abattoirs (Department of Primary Industry, 1986).

Table 1. Key Project Characteristics

Element	Quantities/Description
Inputs	
Number of sheep processed	500 per day
Water consumption	15,000 cubic metres per year
Outputs	
Solid waste output	approx 5,150 tonnes per year
Volume of wastewater	approx 45.5 cubic metres per day (13,650 cubic metres per year)
Nitrogen load in treated wastewater	approx 820 kilograms per year
Phosphorus load in treated wastewater	approx 165 kilograms per year
Biochemical Oxygen Demand (BOD)	approx 12,300 kilograms per year
Suspended solids	approx 8,200 kilograms per year
Oil and grease	approx 4,900 kilograms per year
General	
Total area that can be irrigated	752 hectares
Minimum irrigation area required to satisfy loading criteria for wastewater flow	approx 5.5 hectares
Truck movements	2 trucks per day
Light vehicle movements	20 per day
Abattoir operation times	7am to 3pm; Monday to Friday, 300 days per year
Project lifespan	Indefinite
Nearest residence	approx 750 metres from abattoir building

Figures (attached)

Figure 1a - Regional location

Figure 1b - Location

Figure 2 - Site plan of existing abattoir.

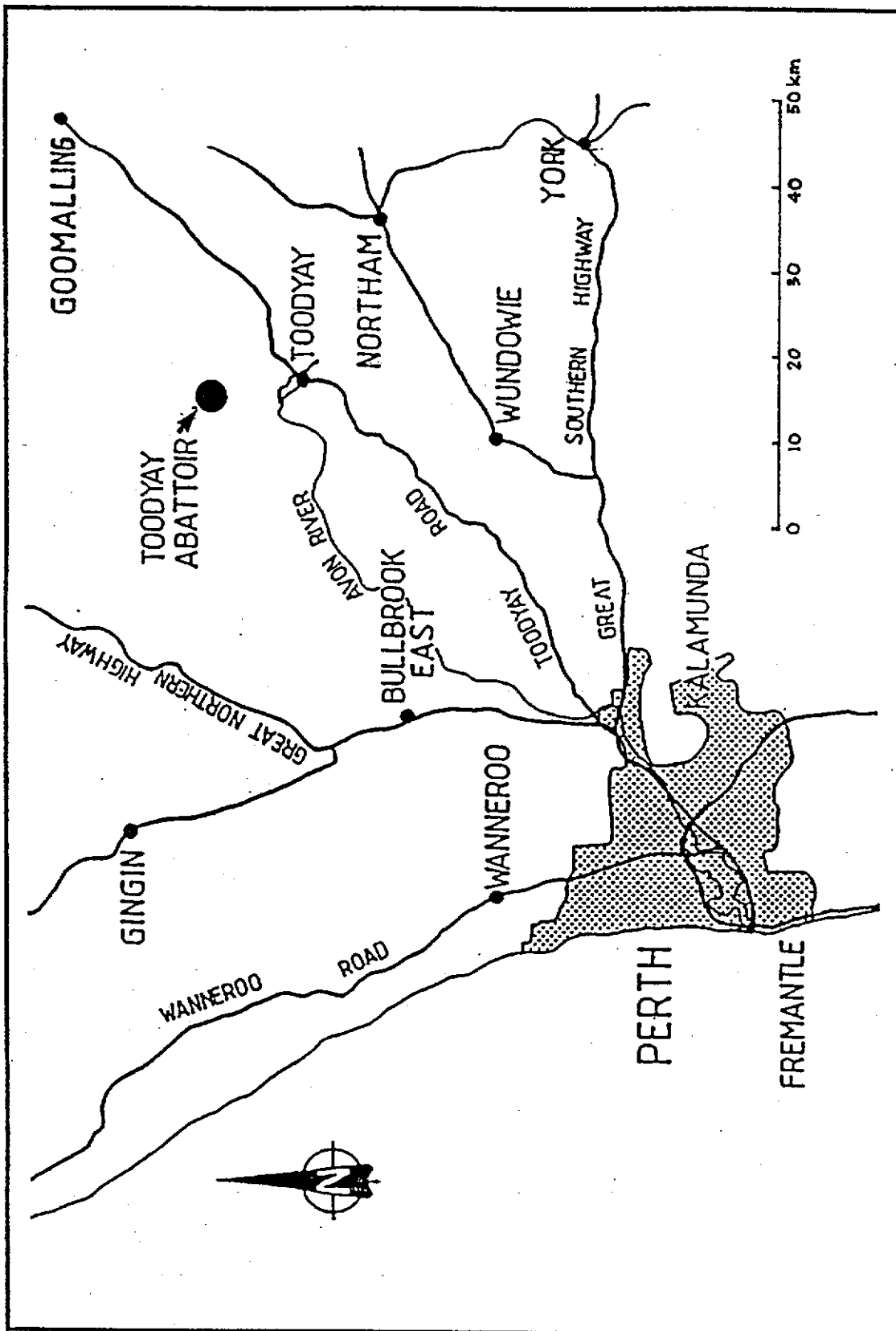


Figure 1a: Regional location of Toodyay Abattoir (Modified from PER)

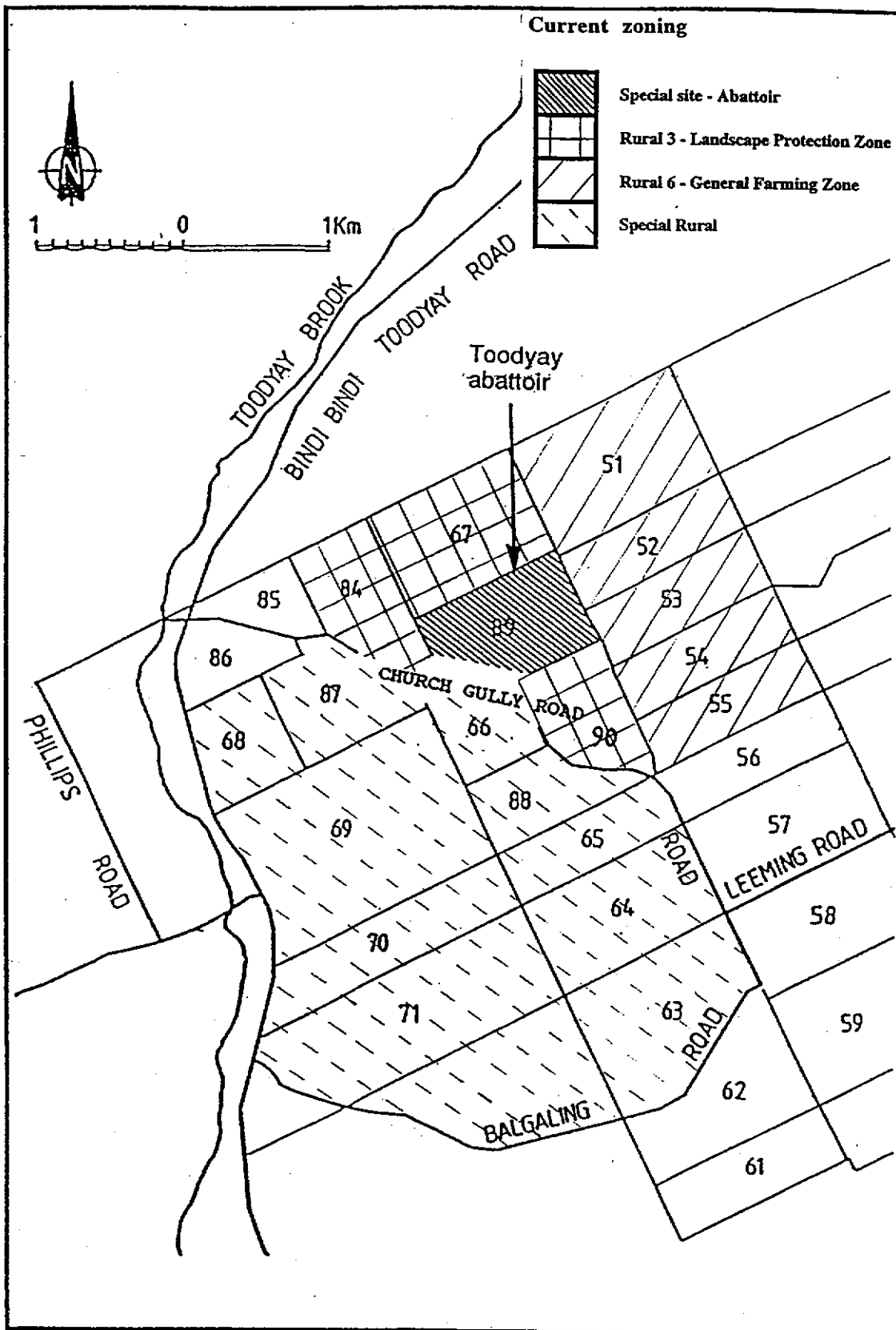


Figure 1b: Location of Toodyay Abattoir (Modified from PER)

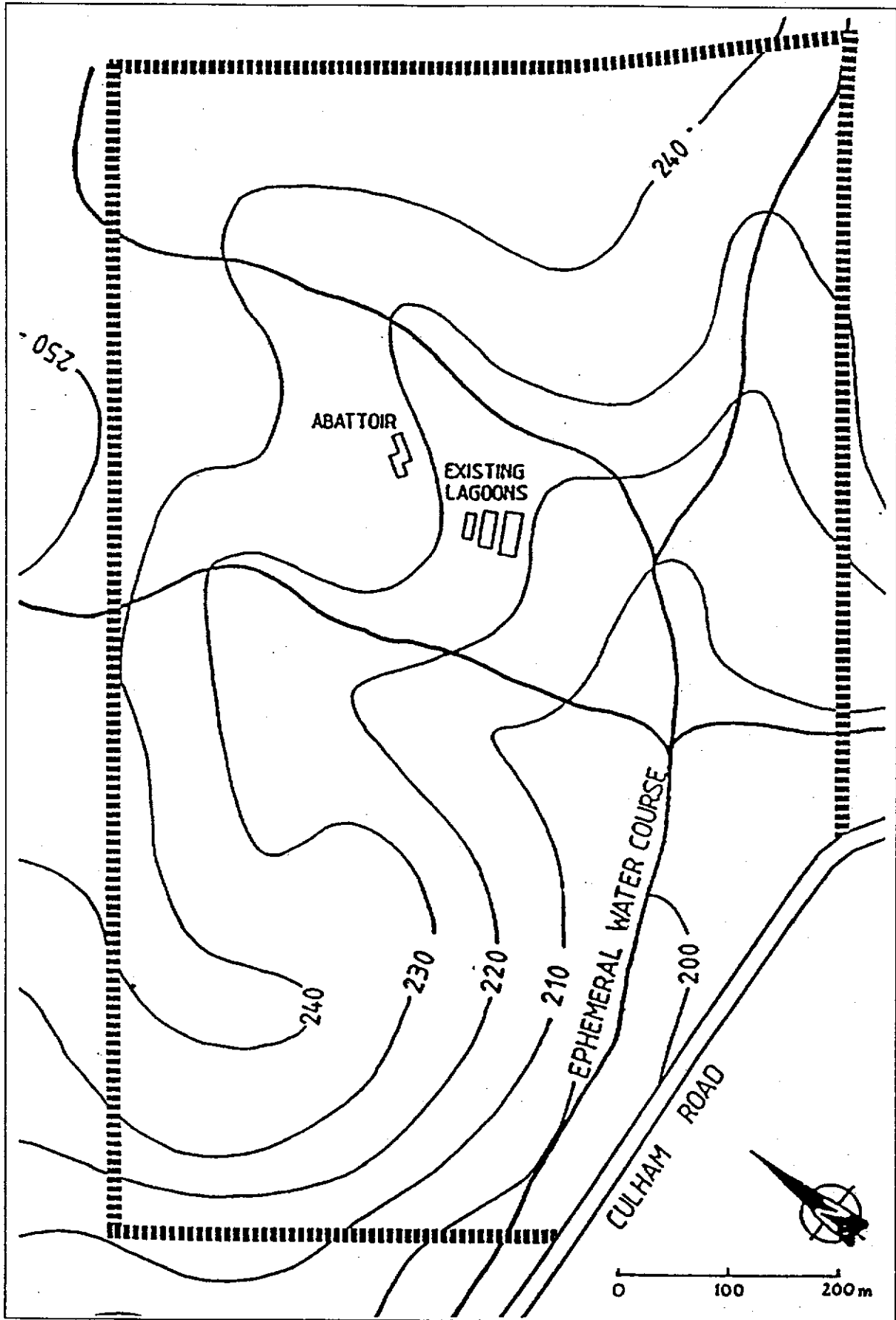


Figure 2: Site plan of existing abattoir (Modified from PER)

**Proponent's Consolidated Environmental Management
Commitments**

July 1999

**UPDATING & REOPENING
OF THE
TOODYAY ABATTOIR
CHURCH GULLY ROAD, TOODYAY (308/1217)**

G J JOHNSON

PROPONENT'S ENVIRONMENTAL MANAGEMENT COMMITMENTS (1217)

JULY 1999

Wastewater management

1. The proponent will build a fully integrated wastewater, solid waste, noise and odour treatment and disposal system which will be designed and installed by a recognised water/wastewater treatment contractor to the requirements of the Department of Environmental Protection. The system will be operated by the proponent and monitored by the consultant to the requirements of the Department of Environmental Protection, the Health Department of Western Australia, and the Water and Rivers Commission.
2. Prior to the construction of the wastewater treatment ponds, the proponent will supply details of their exact location and design to the Department of Environmental Protection, the Water and Rivers Commission, and the Health Department of Western Australia for their consideration.
3. Prior to commissioning of the plant, evaporative lagoon(s) will be constructed to dispose of treated wastewater and will be operated subsequently to the requirements of the Department of Environmental Protection.
4. In the event of pond leakage, the proponent, upon direction from either the Department of Environmental Protection or the Water and Rivers Commission, will immediately line the leaking pond with a plastic liner to the requirements of the Department of Environmental Protection and the Water and Rivers Commission.
5. All wastewater treatment lagoons will be constructed to have at least 0.6 metre freeboard so as to be able to cope with a "once in 30 years storm event".
6. The proponent will ensure that the water level in the wastewater treatment ponds will be maintained to the requirements of the Department of Environmental Protection and the Water and Rivers Commission.
7. The proponent will take immediate remedial action should failure of the wastewater treatment system occur and will carry out such action to the requirements of the Department of Environmental Protection and all relevant authorities.
8. To cope with equipment failure, the proponent will keep sufficient spares for immediate repair to the aerators, the electrical system and other key elements of the system. In such an event, the proponent will advise the Department of Environmental Protection and will take steps in the event of major failure to construct holding lagoons to the requirements of the Department of Environmental Protection and other relevant authorities as quickly as possible.
9. The proponent will ensure that storm water run-off from areas adjacent to the ponds will not enter the wastewater treatment pond system.

10. If, due to some unseen circumstances, the disposal of treated wastewater by irrigation did not meet the Department of Environmental Protection's requirements, the proponent will build an evaporation pond for wastewater disposal and this will be done to the requirements of the Department of Environmental Protection.
11. The proponent will ensure that any treated wastewater will only be irrigated onto the site if it complies with the Department of Environmental Protection and the Water and Rivers Commission requirements for phosphorous and nitrogen.
12. Before the proponent irrigates wastewater onto any property, he will provide the Department of Environmental Protection with a chemical analysis of the treated water for consideration of its suitability for irrigation by the Department of Environmental Protection, the Health Department of Western Australia, and the Water and Rivers Commission. Additionally, the proponent will submit for consideration by the Department of Environmental Protection, the Health Department of Western Australia, and the Water and Rivers Commission, details of the area of land to be irrigated, prior to commissioning the plant.
13. The proponent will not use treated wastewater for any purpose relating to the dressing of meat. Before the use of such water for washing down stock holding areas, approval would be sought from the Health Department of Western Australia and the Department of Environmental Protection. All such wash down water would be recycled back into the wastewater treatment system.
14. The proponent will control insects and weeds around the wastewater treatment system, including the lagoons, any sludge drying facilities or temporary stock holding areas, to the requirements of the Department of Environmental Protection, the Health Department of Western Australia, and the Shire of Toodyay.

Environmental monitoring

15. Prior to construction, the proponent will submit and subsequently implement a monitoring programme for wastewater, groundwater and surface water to the requirements of the Department of Environmental Protection, and on the advice from the Water and Rivers Commission. The monitoring programme will include:
 - (1) initial baseline sampling period to determine whether impacts are presently occurring;
 - (2) parameters to be measured;
 - (3) sampling sites and times;
 - (4) reporting times to the Department of Environmental Protection and the Water and Rivers Commission; and
 - (5) a commitment to modify the Environmental Management Programme to reduce the impact of pollution, to the requirements of the Department of Environmental Protection.

16. All samples taken in the monitoring programme will be analysed in a NATA registered laboratory. In the event that the monitoring programme indicates that an adverse environmental impact is occurring or developing, the proponent will alter the abattoir operation or introduce additional environmental management controls to reduce the impact to an acceptable level.

Solid waste

17. The proponent will dispose of all solid wastes off-site, and will seek the approval of the Department of Environmental Protection for the method and location of solid waste disposal prior to commissioning the plant.
18. The proponent will, three months prior to commissioning, submit a solid waste disposal plan to the Department of Environmental Protection for their consideration. This plan will nominate a Gazetted landfill site which will accept abattoir waste and be to the requirements of the Department of Environmental Protection.
19. If dead animals are delivered to the abattoir they will be removed from the site within 24 hours and disposed of to the requirements of the Department of Environmental Protection.

Dust and odour

20. The proponent will ensure that dust and odour are controlled at all times to the requirements of the Department of Environmental Protection.
21. The proponent will seal any area used by traffic including the access road to the abattoir, if it is deemed by the Department of Environmental Protection that traffic is causing a dust problem.

Noise

22. The proponent will develop and implement a noise management plan, if necessary, to ensure compliance with the Environmental Protection (Noise) Regulations 1997.

Visual amenity

23. In order to retain the visual amenity of the area, the proponent will, three months before commissioning the plant, submit a landscaping (tree planting) plan to the Department of Environmental Protection for consideration.

Ephemeral watercourse protection

24. The proponent will establish a 30 metre wide 'no development zone' buffer along the length of the ephemeral watercourse. This buffer will be fenced and revegetated with native species.

**Copy of Water and Rivers Commission letter
(24 June 1998)**

and attached

**“Guidelines for irrigation of vegetated land with
nutrient-rich wastewaters”
(June 1996 version)**



WATER AND RIVERS
COMMISSION

YOUR REF 175/78/2 :105303
OUR REF 9236
ENQUIRIES Mrs J.P. Chappell
DIRECT TEL (08) 9278 0385

Director Evaluation Division
Department of Environmental Protection
PO Box K822
PERTH WA 6842

DEPARTMENT OF ENVIRONMENTAL PROTECTION	
26 JUN 1998	
File No 1	175/77/2 Name A. BARTER ✓
File No 2	Name
File No 3	Name

Attention: Ms Ann Barter

Dear Ms Barter

Re: Updating and reopening of Toodyay Abattoir

I refer to your letter of 29 April 1998 requesting comments on the update and reopening of Toodyay Abattoir. Officers of the Commission have reviewed the proposal and offer the following comments for your consideration.

The Commission considers that the updating and reopening of Toodyay Abattoir should be environmentally acceptable, subject to the proponents commitments being met and the following issues being addressed.

1. The abattoir has been designed for a maximum capacity of 500 sheep/day, however, the wastewater treatment facility has been designed to cater for the initial slaughter rate of 300 sheep/day. The facility should be designed for the maximum capacity of 500 sheep/day which is understood to be an output of 45 m³/day.
2. The anaerobic ponds must have a minimum capacity equivalent to a 10 day retention time which is the minimum required to achieve an adequate reduction in Biological Oxygen Demand (BOD). The facility should be designed to maintain this retention time even when ponds are off line. It should be recognised that a reasonable loading limit for BOD is 30 kg/ha/day, rather than 30 kg/ha/annum.
3. The inlet for the anaerobic pond should be at the bottom of the pond to prevent crust disturbance.
4. The proposed nitrogen and phosphorous loading limits for the irrigation of land with wastewater exceeds those specified in the Commission's Guidelines for Irrigation of Land with Nutrient Rich Wastewaters, a copy of which is attached. Wastewater from irrigation will ultimately drain into the Avon River, a waterway which is at risk of eutrophication and is subject to a draft Environmental Protection Policy. Based on the potential for eutrophication and the soil type, the loading limits should be 200 kg Nitrogen/ha/year and 50 kg Phosphorus/ha/year.

.../2

127925

5. The site to be irrigated should be managed to minimise the potential for water to pool, located at least 30 m from adjacent watercourses and vegetated. It is recommended that the irrigation areas be divided into sections which may be irrigated alternatively, allowing between one to two weeks drying time.
6. The proponent has indicated that solids will be prevented from entering the wastewater stream. When commissioning the anaerobic pond it may be necessary to add additional solids, such as punch, hay and/or straw to encourage rapid crust formation.
7. Stock holding areas should be sealed and drained to enable washdown and collection of wastewater which should then be directed to the wastewater treatment facility.
8. It is noted that there is a watercourse on the property. It is recommended that a 'no development zone' be placed along the length of the watercourse which is 10 m in width on either side. This will serve as a buffer to protect the watercourse from contamination, erosion and sedimentation and should be fenced off, weeds removed and revegetated with native species.

It should be recognised that groundwater resources in the vicinity of the abattoir are scarce and there is no guarantee that this resource will be sustainable for long term use.

If you have any queries please contact Mrs Jackie Chappell on (08) 9278 0385.

Yours sincerely



Tony Laws
A/MANAGER
STRATEGIC PROJECTS

24 June 1998

WATER AND RIVERS COMMISSION

Guidelines for irrigation of vegetated land with nutrient-rich wastewaters

Scope: These guidelines have been prepared to ensure consistency in decision making when assessing industrial & commercial projects. They do not apply in sensitive areas where detailed risk assessment is necessary, eg in public drinking water source areas, upstream of conservation value wetlands or managed estuaries, or where formal government policy may render these guidelines invalid.

Site vulnerability: Surface soils & receiving environments have been divided into 4 vulnerability categories as follows:

- Cat. A - Coarse sandy soils / gravels draining to surface waters with mod./high eutrophication risk.
- Cat. B - Coarse sandy soils / gravels draining to waters with a low risk of eutrophication.
- Cat. C - Loams / clay soils (PRI >10) draining to waters with mod. /high eutrophication risk.
- Cat. D- Loams / clay soils (PRI > 10) draining to waters with a low risk of eutrophication.

NB: PRI means phosphorus retention index, ie fine soils with high iron or magnesium content.

Irrigation rates: Irrigation will normally be conducted to match seasonal vegetation evapo-transpiration rates, taking into account soil type, soil moisture content, irrigation method, land slopes & depth to water table. For clay soils irrigation rates up to 5 mm/hour are reasonable, while sandy sites may accept 15 mm/ hour without runoff. Irrigated areas should desirably have a slope ranging from 0.5 to 10 % to avoid ponding or erosion. Irrigated waters should always be applied evenly & the irrigated area allowed to dry out for 24 hours between applications during hot dry weather & up to 10 days during cool & wet weather.

Soil nutrient status: Nutrient-rich wastewaters should not be applied where there is a recent history of heavy fertiliser application, or animals have been held at high stocking densities or other sources of nutrients have been discharged on-site over an extended period of time, unless the soil nutrient status has been determined & considered in the site irrigation management plan.

Application Criteria:

1. Wastewaters containing volatile (degradable) organic matter should not be applied at rates exceeding 30 kilograms / hectare / day expressed as Biochemical Oxygen Demand (BOD) to avoid offensive odours. For wastewaters with BOD concentrations exceeding 150 mg/ L, further biological stabilisation methods should be used prior to irrigation. Heavy metals in wastewaters should not exceed ANZECC 's 1992 Australian Water quality guideline values.

2. Irrigated areas should normally be at least one metre above the highest seasonal groundwater table & no ponded water present on the site.

3. Maximum nutrient (nitrogen as N & phosphorus as P) application criteria in irrigation waters:

Vulnerability Category	N criterion kg /hectare / year	N concentrat'n* (mg / L)	P criterion kg / hectare / year	P concentrat'n* (mg / L)
A	40	2.5	10	0.6
B	80	5.0	20	1.2
C	200	12.5	50	3.1
D	480	30	120	7.5

* based on an average of 50 mm (500 kl /ha) of water applied/week over 32 weeks/annum & no other nutrient sources. Wastewater should be stored over the wet season.

4. To discuss these guidelines, please contact the Pollution Prevention Section at the Commission.